

End of Tri 3 Study Guide

- ***Standard 1: I understand that organisms with certain traits are more fit in particular environments.***

There are 3 types of polar bears: ones with thick coats, ones with thin coats and ones with medium coats. Winter is coming, and the temperatures are dropping rapidly. The bears must be kept warm, or they will freeze to death.

1. Which polar bears are most fit in this environment?

Thick coat

2. What 2 things must they do to be considered fit?

Survive and reproduce

In ostriches, there are 2 types: ones that run fast and those that run slowly. The fast birds can reach up to 40 miles an hour. Jackals love to eat ostrich, and they can reach speeds of up to 35-40 miles per hour.

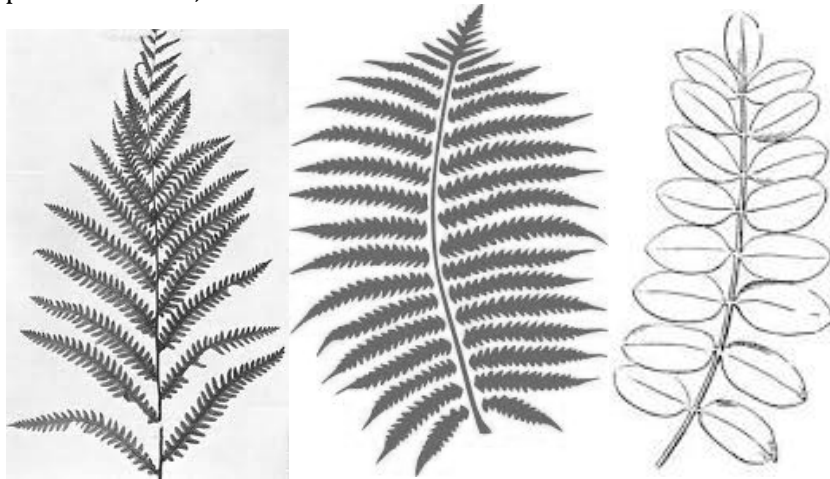
3. Which ostriches are most fit in this environment?

The fastest ones will survive best and have the most babies

4. What adaptation do they have?

They run fast

Using the leaves pictured below, make an inference about which 2 are the most closely related.

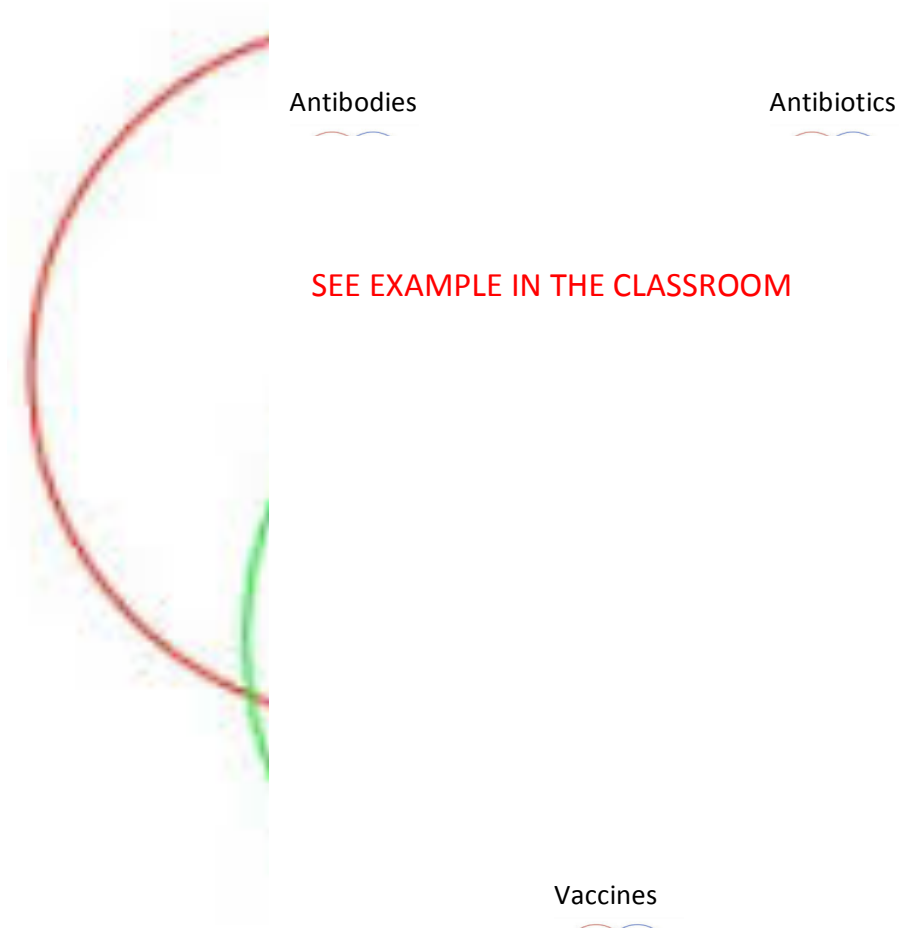


5.

Inference/Claim (Which 2 are closest relatives?)	Observation(s)/Evidence (Why do you think so?)
<p>I think the first two ferns are most closely related</p>	<p>(answer will vary) example: I think that both have many sharp pointy leaves and a middle spine</p>

- **Standard 2: Human beings are constantly interacting with other organisms that cause disease.**

6. Fill in the Venn diagram to represent what you know about antibodies, antibiotics, and vaccines.



7. Draw a symbol to represent each:

<i>Antibodies</i>	<i>Antibiotics</i>	<i>Vaccine</i>
Answers will vary	Answers will vary	Answers will vary

- Standard 3: Human activity can change living organisms and ecosystems.
- Standard 4: The flow of energy and the recycling of matter are essential to a stable ecosystem.
- Standard 5: Natural systems include a variety of organisms that interact with one another in several ways.

8. Which is correct for a food chain/food web: Wolf → Rabbit or Rabbit → Wolf

9. In the space provided, draw a food web using the following items. Please label each of your pictures:

- | | | |
|----------|------------|-----------|
| • grass | • sunlight | • hawk |
| • wolf | • worms | • insects |
| • rabbit | • mouse | |

- ✓ Don't forget to think about which direction your arrows should be pointing – energy comes from where and goes to where?

SEE EXAMPLE IN THE CLASSROOM

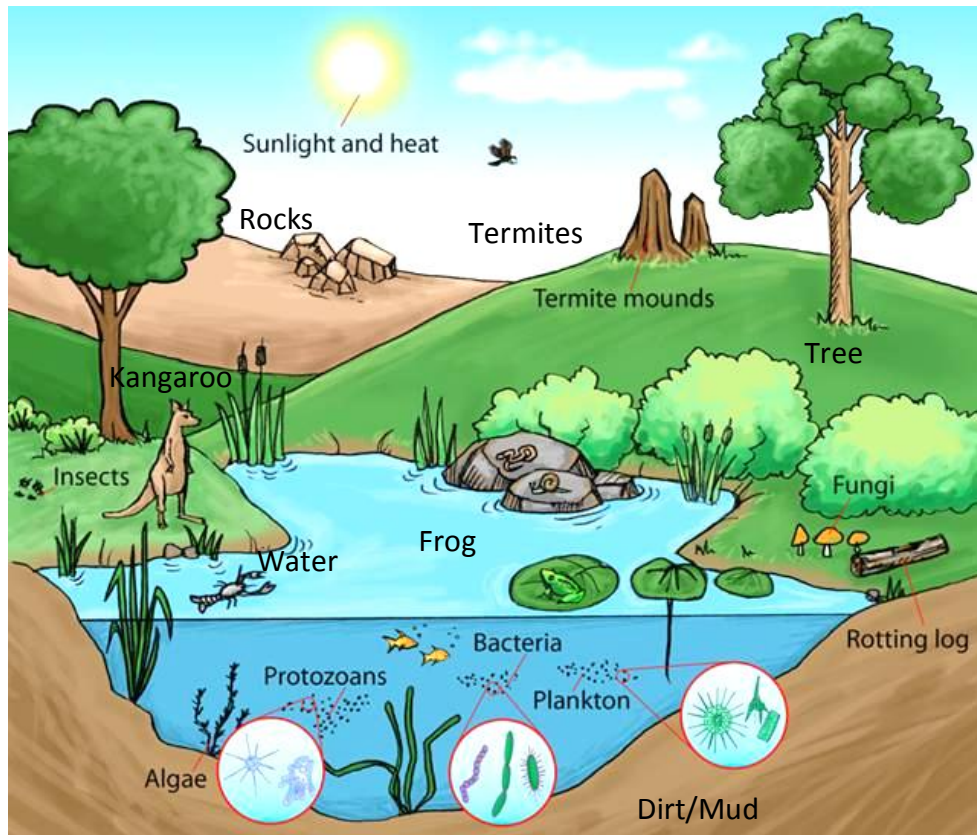
10. Using your food web above, give an example of each of the roles within the ecosystem.

- | | | |
|------------------------------------|---|--------------------------------|
| • predator <u>Wolf / hawk</u> | • prey <u>grass / mouse / rabbit</u> | |
| • producer <u>Grass</u> | • consumer <u>everything except sun and grass</u> | • detritivore <u>worm</u> |
| • herbivore <u>Insect / rabbit</u> | • omnivore <u>mouse</u> | • carnivore <u>wolf / hawk</u> |

11. Using the food web above, predict one change that might happen if a new bug trap causes the insect population to go extinct. The grass population might go way up; the mouse population might drop (if they eat insects), everything connected to insects will change

12. What is one way that you can limit your impact on natural ecosystems?

13. Look at the picture below and identify **5 abiotic** and **biotic** factors within the ecosystem.



Biotic	Abiotic
<ul style="list-style-type: none"> • Tree • Kangaroo • Insects • Protozoan • Algae 	<ul style="list-style-type: none"> • Sunlight and heat • Rocks • Water • Termite Mound

14. In the table below write or draw (with labels) an example for each vocabulary word.

<p>An example of a population in my Science classroom would include:</p> <p>Answers will vary</p>	<p>An example of a community in my Science classroom would include:</p> <p>Answers will vary</p>	<p>An example of an ecosystem in my Science classroom would include:</p> <p>Answers will vary</p>	<p>The ecosystem in my classroom is part of the biosphere. This is:</p> <p>Answers will vary</p>
--	---	--	---

- Evolution Vocabulary**

Fitness	Species	Fossil
Fossil record	Evolution	Population
Extinction	Adaptation	
Variation	Natural selection	

- Disease Vocabulary**

Antibiotic	Noninfectious	Virus...
Vaccine	Infectious	Fungi
Immune system	Antibodies	Immunity
Microorganism	Bacteria	Parasite
Skin	Macrophage	B-Cell
Disease	T-Cell	

- Ecology Vocabulary**

Host	Biosphere	Species	Photosynthesis
Biotic	Community	Limiting factors	Producer
Omnivore	Detritivore	Food chain	Ecosystem
Population	Carrying capacity	Carnivore	Parasite
Ecology	Food web	Abiotic	Predator
Herbivore	Organism	Consumer	Prey

15. Which words above are microorganisms that can cause disease?

16. Which words above describe the eating/food habits of organisms?

17. Which words above are processes?

18. Which words above are diagrams?

19. Which words above deal with death or the opposite of living?

20. Which words above deal with things that are very small?

21. Which words are pieces of the immune system?

22. ***Can you define each word?***